



Air Space Cyber—User Defined Operational Picture (ASC-UDOP)

POC: Kyle Holbitter, AFRL/RISB (315) 330-1512 Kyle.Holbitter@rl.af.mil

Overview:

The Air, Space, and Cyber User-Defined Operational Picture (ASC-UDOP) is an AFRL developed visualization application that allows users to graphically configure and manipulate data streams from a variety of sources pertaining to the Air, Space, and Cyber domains. It applies composable visualization techniques to provide an environment appropriate for dealing with large and varied types of data ranging from synthetic to live, doing so with unprecedented configurability.

ASC-UDOP was designed with two main objectives:

1) Allow processing large sets of heterogeneous data

- Provide access to data sets from various sources without the need to pre-process the data
- Facilitate confidence in the data by providing the ability to trace back from visualization to original data
- Provide a scalable system capable of processing 100k elements while still being responsive to the user

2) Provide the user the ability to define a dynamic operational picture

- Adopt a composable visualization paradigm that provides a graphical interface for building data visualizations, alleviating the need to do so programmatically
- Allow manipulation of this visualization while the system is running in order to adapt the visualization to newly available data sources or changes in the mission objectives
- Provide a mechanism to save and share these constructed visualizations with anyone using the ASC-UDOP application

ASC-UDOP offers five key benefits to leaders:

- Places visualization capabilities directly into the hands of the domain experts
- Provides high-level views of incoming data as well as the ability to process and filter on specific points of interest
- Provides an application that is as dynamic as the environments it's intended to operate in
- Enhances productivity of operational personnel
- Open, modular architecture supporting enhancement, evolution and unit-specific needs

(OVER)

